AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application:

1-169. (canceled)

170. (currently amended) A method for producing an immune response, comprising

a) providing:

i) an animal; and ii) a composition comprising one ~~or more~~ of: 1) a hybrid particle comprising a polypeptide comprising a non-primate hepadnavirus core antigen ~~amino acid sequence linked to a~~ and a heterologous antigen, ~~wherein said hepadnavirus core antigen comprises a loop region~~, and 2) an expression vector encoding said polypeptide; and

b) administering said composition to said animal under conditions such that an immune response is generated to said heterologous antigen.

171. (original) The method of claim 170, wherein said immune response comprises one or more of lymphocyte proliferative response, cytokine response and antibody response.

172. (original) The method of claim 171, wherein said antibody response comprises production of IgG antibodies.

173. (canceled)

174. (currently amended) The method of claim 170, wherein said non-primate hepadnavirus core antigen ~~sequence~~ is a rodent hepadnavirus core antigen ~~sequence~~.

175. (currently amended) The method of claim 170, wherein said non-primate hepadnavirus core antigen ~~sequence~~ is an avihepadnavirus core antigen ~~sequence~~.

176. (currently amended) A method for producing an immune response, comprising:

a) providing: i) an animal; and ii) a composition comprising one ~~or more~~ of: 1) a hybrid particle comprising a polypeptide comprising a heterologous antigen ~~linked to one or more~~ and a nonhuman primate hepadnavirus core antigen ~~sequence that comprises a loop region, wherein the C-terminal sequence of the hepadnavirus core antigen sequence is replaced by from 1 to 100 amino acids, and wherein said 1 to 100 amino acids does not consist of cysteine or of the wild type C-terminal sequence of said hepadnavirus core antigen~~; and 2) an expression vector encoding said polypeptide; and

b) administering said composition to said animal under conditions such that an immune response is generated to said heterologous antigen.

177. (original) The method of claim 176, wherein said immune response comprises one or more of lymphocyte proliferative response, cytokine response and antibody response.

178. (original) The method of claim 177, wherein said antibody response comprises production of IgG antibodies.

179-187. (canceled)

188. (new) The method of Claim 170, wherein said animal is a human having pre-existing antibodies to hepatitis B virus core antigen.

189. (new) The method of Claim 176, wherein said animal is a human having pre-existing antibodies to hepatitis B virus core antigen.

190. (new) The method of Claim 174, wherein said rodent hepadnavirus core antigen is selected from the group consisting of a woodchuck hepadnavirus core antigen, a ground squirrel hepadnavirus core antigen, and an arctic ground squirrel hepadnavirus core antigen.

191. (new) The method of Claim 190, wherein said rodent hepadnavirus core antigen is a woodchuck hepadnavirus core antigen.

192. (new) The method of Claim 190, wherein said rodent hepadnavirus core antigen is a ground squirrel hepadnavirus core antigen.

193. (new) The method of Claim 190, wherein said rodent hepadnavirus core antigen is an arctic ground squirrel hepadnavirus core antigen.

194. (new) The method of Claim 175, wherein said avihepadnavirus core antigen is selected from the group consisting of a duck hepadnavirus core antigen, a Ross' goose hepadnavirus core antigen, a hereon hepadnavirus core antigen, a Sheldgoose hepadnavirus core antigen, and a stork hepadnavirus core antigen.

195. (new) The method of Claim 176, wherein said nonhuman primate hepadnavirus core antigen is selected from the group consisting of a chimpanzee hepatitis B virus core antigen, a gibbon hepatitis B virus core antigen, an orangutan hepatitis virus core antigen, and a woolly monkey hepatitis virus core antigen.

196. (new) The method of Claim 170, wherein C-terminal sequence of the hepadnavirus core antigen is replaced by from 1 to 100 amino acids, and wherein said 1 to 100 amino acids does not consist of cysteine or of wild type C-terminal sequence of said hepadnavirus core antigen.

197. (new) The method of Claim 176, wherein C-terminal sequence of the hepadnavirus core antigen is replaced by from 1 to 100 amino acids, and wherein said 1 to 100 amino acids does not consist of cysteine or of wild type C-terminal sequence of said hepadnavirus core antigen.